

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Navy									DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 4: Advanced Component Development & Prototypes (ACD&P)				R-1 ITEM NOMENCLATURE PE 0603860N: JT Precision Approach & Ldg Sys							
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	74.060	149.680	159.151	0.000	159.151	123.959	114.109	61.210	0.000	0.000	887.471
2329: JPALS	74.060	138.726	121.165	0.000	121.165	74.713	79.686	39.211	0.000	0.000	732.863
3228: JPALS 1B	0.000	10.954	37.986	0.000	37.986	49.246	34.423	21.999	0.000	0.000	154.608

A. Mission Description and Budget Item Justification

This program element provides for the development, integration, and testing of the Joint Precision Approach and Landing System (JPALS), which will be applicable to Department of Defense (DoD) Ground systems, DoD aircraft, and Navy and Coast Guard air capable surface ships. JPALS will provide a rapidly deployable, adverse weather, adverse terrain, day-night precision approach and landing capability. Operating environments include fixed or permanent ground facilities, tactical facilities, and shipboard. JPALS will be interoperable with civil landing systems. The JPALS program was established in response to the Joint Mission Need Statement (MNS) for Precision Approach and Landing Capability (PALC), which was approved by the Chief of Naval Operations on 28 July 1994 and the Chief of Staff of the Air Force on 8 August 1994. The PALC MNS was validated by the Joint Requirements Oversight Council (JROC) on 29 August 1995. Army Joint Service participation was included in the 28 May 1996 Principal Deputy Under Secretary of Defense (Acquisition and Technology) Milestone 0 Acquisition Decision Memorandum (ADM), which also designated the Air Force as the Lead Service. In March 2004, the JPALS Overarching Integrated Program Team (OIPT) determined that the MNS should be converted to an Initial Capabilities Document (ICD). The JPALS ICD was approved by the JROC on 19 September 2005. On 21 July 2007 JROCM approved the JPALS Capability Development Document (CDD) and designated the Navy as the Lead Service. The Analysis of Alternatives (AoA) was finalized in 3Q FY2007.

UNCLASSIFIED

R-1 Line Item #70

Page 1 of 18

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Navy				DATE: February 2010	
APPROPRIATION/BUDGET ACTIVITY		R-1 ITEM NOMENCLATURE			
1319: Research, Development, Test & Evaluation, Navy		PE 0603860N: JT Precision Approach & Ldg Sys			
BA 4: Advanced Component Development & Prototypes (ACD&P)					
B. Program Change Summary (\$ in Millions)					
	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Previous President's Budget	76.822	150.304	0.000	0.000	0.000
Current President's Budget	74.060	149.680	159.151	0.000	159.151
Total Adjustments	-2.762	-0.624	159.151	0.000	159.151
• Congressional General Reductions		-0.624			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		0.000			
• Congressional Directed Transfers		0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	-1.809	0.000			
• Program Adjustments	0.000	0.000	159.151	0.000	159.151
• Rate/Misc Adjustments	-0.953	0.000	0.000	0.000	0.000
Change Summary Explanation					
Technical: Not applicable.					
Schedule: Not applicable.					
FY11 from previous President's Budget is shown as zero because no FY11-15 data was presented in President's Budget 2010.					

UNCLASSIFIED

R-1 Line Item #70

Page 2 of 18

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy								DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 4: Advanced Component Development & Prototypes (ACD&P)				R-1 ITEM NOMENCLATURE PE 0603860N: JT Precision Approach & Ldg Sys				PROJECT 2329: JPALS			
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
2329: JPALS	74.060	138.726	121.165	0.000	121.165	74.713	79.686	39.211	0.000	0.000	732.863
Quantity of RDT&E Articles	0	1	1	0	1	0	0	0	0		
A. Mission Description and Budget Item Justification											
JPALS Increment 1A provides for development, integration, installation, and test of Sea-Based JPALS to meet IOC of CVN. This effort includes the build and test of Ship Global Positioning System/Inertial Navigation System (GPS/INS) based precision approach and landing systems to replace obsolete SPN-46 and SPN-35 Systems. Additionally, this requirement supports the JPALS Integration on Amphibious and DDG class ships (TACAN Replacement) and provides critical enabling technology for Joint Strike Fighter and Navy Unmanned Combat Air System (UCAS).											
One JPALS Land and one JPALS Ship based Engineering Development Model (EDM) test article will be delivered in FY 2010 to support system development and demonstration. User listed below:											
FY10 - 1 unit for CTR Ship Integration Lab (SIL)											
FY11 - 1 unit for Govt Landing Systems Test Facility (LSTF)											
B. Accomplishments/Planned Program (\$ in Millions)											
	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total						
JPALS EMD Increment 1A - Shipboard	69.990	133.893	117.996	0.000	117.996						
JPALS Increment 1A provides for development, integration, installation, and test of Sea-Based JPALS to meet IOC of CVN. This effort includes the build and test of Ship Global Positioning System/Inertial Navigation System (GPS/INS) based precision approach and landing systems to replace obsolete SPN-46 and SPN-35 Systems. Additionally, this requirement supports the JPALS Integration on Amphibious and DDG class ships (TACAN Replacement) and provides critical enabling technology for Joint Strike Fighter and Navy Unmanned Combat Air System (UCAS).											

UNCLASSIFIED

R-1 Line Item #70

Page 3 of 18

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 4: Advanced Component Development & Prototypes (ACD&P)		R-1 ITEM NOMENCLATURE PE 0603860N: JT Precision Approach & Ldg Sys		PROJECT 2329: JPALS		
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2009 Accomplishments: First full year of EMD, completed SFR.						
FY 2010 Plans: Complete PDR and first EDM delivery.						
FY 2011 Base Plans: Complete CDR, begin JSF flight and CV certification, begin IT 1-3 test events and AIG delivery.						
JPALS EMD Increment 1A - Aircraft Integration Guide (AIG) Air Integration Guide is principle deliverable of the JPALS SDD contract. This guide will serve as the integration document for air platforms.		4.070	4.833	3.169	0.000	3.169
FY 2009 Accomplishments: Developed initial iteration of the AIG.						
FY 2010 Plans: Continue development of the AIG.						
FY 2011 Base Plans: Begin Initial A/C integrations.						
Accomplishments/Planned Programs Subtotals		74.060	138.726	121.165	0.000	121.165

UNCLASSIFIED

R-1 Line Item #70

Page 4 of 18

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy									DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 4: Advanced Component Development & Prototypes (ACD&P)				R-1 ITEM NOMENCLATURE PE 0603860N: JT Precision Approach & Ldg Sys				PROJECT 2329: JPALS			
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• OPN/2867: JPALS	0.000	0.000	0.000	0.000	0.000	0.000	0.000	15.723	72.865	90.153	178.741
D. Acquisition Strategy											
<p>Technology Development (TD) phase was conducted jointly by NAVAIRSYSCOM (PMA213), USAF Electronic Systems Command (Global Air) and multiple industry partners. This effort provided the concept of operations, performance specifications and technology readiness levels necessary to provide the foundation from which to launch the Increment 1 SDD phase development. In March 2007, overall joint program leadership transferred from the USAF to the USN. The JPALS 1A phase reached MS B on 27 June 2008 and the SDD phase development contract was awarded on 17 July 2008 and tasking consists of seabased JPALS, related ship and airborne reference systems, end-to-end software algorithms, necessary ship installation hardware, test equipment, system simulation software, and other RDT&E deliverable products to the joint team. The SDD contact was decided after full and open competition. Future procurement of airborne systems will consist of modifications to Original Equipment Manufacture (OEM) aircraft integration and to existing avionics. Seabased JPALS will be developed by the Navy with government owned or non-proprietary algorithms to an open system architecture in order to facilitate the compatible integration of many different aircraft and avionics architectures. As Lead Service, the Navy will manage the Joint Program to develop all JPALS increments. An updated JPALS Acquisition Strategy separates Increment 1 into two Increments (Inc 1A & Inc 1B). JPALS Increment 1A provides for development, integration, installation, and test of Sea-Based JPALS to meet IOC of CVN. Additionally, this requirement supports the JPALS Integration on Amphibious ships and DDG class ships and provides critical enabling technology for Joint Strike Fighter and Navy UCAS. JPALS Increment 1B provides for integration and testing into the avionics of F/A -18E/F, EA-18G, and MH-60R. This is the first phase of the carrier airwing (CVW) integration to JPALS. This second phase of aircraft integration provides JPALS capable aircraft for CVN-79 work-ups and deployment.</p>											
E. Performance Metrics											
<p>MS B conducted 27 June 2008 and approval granted for program progression to EMD phase. PDR conducted first quarter FY 2010. CDR planned for first quarter FY2011.</p>											

UNCLASSIFIED

R-1 Line Item #70

Page 5 of 18

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy											DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 4: Advanced Component Development & Prototypes (ACD&P)					R-1 ITEM NOMENCLATURE PE 0603860N: JT Precision Approach & Ldg Sys					PROJECT 2329: JPALS				
Product Development (\$ in Millions)														
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total				
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract	
Primary Hardware Development	C/CPIF	Raytheon Fullerton CA	77.004	78.304	Jan 2010	63.556	Jan 2011	0.000		63.556	58.816	277.680	278.694	
Aircraft Integration-Non Specific	Various/ FFP	Var Var	0.644	0.479	Dec 2009	0.308	Jan 2011	0.000		0.308	0.721	2.152	Continuing	
Aircraft Integration-F/ A-18 E/F/G	SS/CPAF	Boeing Herndon VA	1.953	2.323	Dec 2009	0.123	Jan 2011	0.000		0.123	4.713	9.112	9.112	
Aircraft integration-MH-60 R/S	SS/CPAF	Lockheed Martin Manassas VA	1.869	1.549	Dec 2009	0.103	Jan 2011	0.000		0.103	3.508	7.029	7.029	
Aircraft Integration-F22 JSF	SS/CPAF	Lockheed Martin Manassas VA	0.000	0.000		0.093	Jan 2011	0.000		0.093	0.900	0.993	0.993	
Aircraft Integration-MH60 R/S	SS/CPAF	Sikorsky CT	0.000	0.000		0.062	Jan 2011	0.000		0.062	1.713	1.775	1.775	
Aircraft Integration-E2D	SS/CPAF	Northrup Grumann Not Specified	0.000	0.000		0.093	Jan 2011	0.000		0.093	0.900	0.993	0.993	
Aircraft Integration-Systems Engineering	WR	NAWCAD Pax River, MD	1.775	15.831	Dec 2009	0.977	Dec 2010	0.000		0.977	6.116	24.699	Continuing	
Ship integration	WR	NAWCAD Pax River, MD	12.448	5.471	Dec 2009	7.129	Dec 2010	0.000		7.129	12.321	37.369	Continuing	
Award Fee	C/CPAF	Var Var	4.572	4.584	Aug 2010	3.112	Aug 2011	0.000		3.112	5.881	18.149	18.149	
Primary hardware Development-TD	Various/ Various	Var Var	105.504	0.000		0.000		0.000		0.000	0.000	105.504	Continuing	
Subtotal			205.769	108.541		75.556		0.000		75.556	95.589	485.455	316.745	

UNCLASSIFIED

R-1 Line Item #70

Page 6 of 18

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy											DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 4: Advanced Component Development & Prototypes (ACD&P)				R-1 ITEM NOMENCLATURE PE 0603860N: JT Precision Approach & Ldg Sys				PROJECT 2329: JPALS					
Product Development (\$ in Millions)													
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Remarks Remarks: Conducts non-recurring engineering efforts under the EMD contract including requirements identification. Conducts System Requirements Review, System Function Review, Preliminary Design Review and Integrated Baseline Review under the EMD contract. Begins airwing integration to support CVN-21 efforts. Target Value listed for EMD contract is based on latest Program Office Estimate. No award fees have been awarded to date.													
Support (\$ in Millions)													
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Development Support	Various/ Various	Var Var	21.514	0.000		0.000		0.000		0.000	0.000	21.514	Continuing
Systems Engineering Support-SDD	Various/ Various	Var Var	7.726	7.881	Dec 2009	15.846	Dec 2010	0.000		15.846	27.119	58.572	Continuing
Integrated Logistics Support	WR	NAWCAD Pax River, MD	5.954	1.478	Dec 2009	3.659	Dec 2010	0.000		3.659	9.417	20.508	Continuing
Subtotal			35.194	9.359		19.505		0.000		19.505	36.536	100.594	
Remarks													

UNCLASSIFIED

R-1 Line Item #70

Page 7 of 18

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy											DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 4: Advanced Component Development & Prototypes (ACD&P)					R-1 ITEM NOMENCLATURE PE 0603860N: JT Precision Approach & Ldg Sys				PROJECT 2329: JPALS					
Test and Evaluation (\$ in Millions)														
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total				
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract	
Developmental Test & Evaluation	WR	NAWCAD Pax River, MD	9.372	9.451	Dec 2009	10.331	Dec 2010	0.000		10.331	32.919	62.073	Continuing	
Operational Test & Evaluation	WR	COMOPTEVFOR Norfolk VA	0.939	0.381	Dec 2009	0.389	Dec 2010	0.000		0.389	10.182	11.891	Continuing	
Subtotal			10.311	9.832		10.720		0.000		10.720	43.101	73.964		
Remarks														
Remarks: DT focuses on EMD phase test documentation planning and test range coordination. Develops DT test cases. Monitoring of EMD contractor system integration build up. Operational test activities include test and evaluation master plan requirements into test cases.														
Management Services (\$ in Millions)														
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total				
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract	
Government Engineering Support	WR	NAWCAD Pax River, MD	24.346	8.106	Dec 2009	12.362	Dec 2010	0.000		12.362	10.316	55.130	Continuing	
Program Management Support-Cost	WR	NAWCAD Pax River, MD	7.007	1.000	Dec 2009	1.100	Dec 2010	0.000		1.100	3.400	12.507	Continuing	
PM Support-MSS	C/CPFF	Amelex California, MD	4.651	1.372	Dec 2009	1.402	Dec 2010	0.000		1.402	4.206	11.631	11.631	
Travel	WR	NAVAIR Pax River, MD	1.402	0.516	Dec 2009	0.520	Dec 2010	0.000		0.520	1.560	3.998	Continuing	
Subtotal			37.406	10.994		15.384		0.000		15.384	19.482	83.266	11.631	

UNCLASSIFIED

R-1 Line Item #70

Page 8 of 18

UNCLASSIFIED

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UNCLASSIFIED

R-1 Line Item #70

Page 9 of 18

UNCLASSIFIED

Exhibit R-4, RDT&E Schedule Profile: PB 2011 Navy																	DATE: February 2010											
APPROPRIATION/BUDGET ACTIVITY										R-1 ITEM NOMENCLATURE										PROJECT								
1319: Research, Development, Test & Evaluation, Navy										PE 0603860N: JT Precision Approach & Ldg Sys										2329: JPALS								
BA 4: Advanced Component Development & Prototypes (ACD&P)																												
Fiscal Year	2009				2010				2011				2012				2013				2014				2015			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Acquisition Milestones Increment 1A																												
Technology Development																												
EMD																												
Development																												
EDM Delivery																												
Integration JSF																												
Test & Evaluation Milestones																												
Integrated Test/Operational Test																												
Production Milestones																												

UNCLASSIFIED

R-1 Line Item #70

Page 10 of 18

UNCLASSIFIED

Exhibit R-4A, RDT&E Schedule Details: PB 2011 Navy			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603860N: <i>JT Precision Approach & Ldg Sys</i>	PROJECT 2329: <i>JPALS</i>	

Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
Engineering Model Demonstration	1	2009	4	2014
Preliminary Design Review (PDR)	1	2010	1	2010
Critical Design Review (CDR)	1	2011	1	2011
AIG Delivery	1	2011	1	2011
EDM 1 Delivery	4	2010	4	2010
EDM 2 Delivery	4	2011	4	2011
EDM 3 Delivery	1	2012	1	2012
EDM 4 Delivery	2	2012	2	2012
EDM 5 Delivery	2	2012	2	2012
EDM 6 Delivery	3	2012	3	2012
EDM 7 Delivery	4	2012	4	2012
EDM 8 Delivery	4	2012	4	2012
JSF Flight Test & CV Cert	3	2011	4	2012
JSF OT&E	3	2013	2	2014
IT-1-3/OA	4	2011	1	2013
IT-4	3	2013	1	2014
IOT&E	1	2014	4	2014
MS C	2	2013	2	2013

UNCLASSIFIED

UNCLASSIFIED

Exhibit R-4A, RDT&E Schedule Details: PB 2011 Navy			DATE: February 2010																														
APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>		R-1 ITEM NOMENCLATURE PE 0603860N: <i>JT Precision Approach & Ldg Sys</i>		PROJECT 2329: <i>JPALS</i>																													
		<table> <tr> <th rowspan="2">Event</th><th colspan="2">Start</th><th colspan="2">End</th></tr> <tr> <th>Quarter</th><th>Year</th><th>Quarter</th><th>Year</th></tr> <tr> <td>IOC</td><td align="center">4</td><td align="center">2014</td><td align="center">4</td><td align="center">2014</td></tr> <tr> <td>LRIP Contract Award</td><td align="center">3</td><td align="center">2013</td><td align="center">3</td><td align="center">2013</td></tr> <tr> <td>RDT&E LRIP Delivery</td><td align="center">3</td><td align="center">2013</td><td align="center">3</td><td align="center">2013</td></tr> <tr> <td>FRP Contract Award</td><td align="center">4</td><td align="center">2014</td><td align="center">4</td><td align="center">2014</td></tr> </table>			Event	Start		End		Quarter	Year	Quarter	Year	IOC	4	2014	4	2014	LRIP Contract Award	3	2013	3	2013	RDT&E LRIP Delivery	3	2013	3	2013	FRP Contract Award	4	2014	4	2014
Event	Start		End																														
	Quarter	Year	Quarter	Year																													
IOC	4	2014	4	2014																													
LRIP Contract Award	3	2013	3	2013																													
RDT&E LRIP Delivery	3	2013	3	2013																													
FRP Contract Award	4	2014	4	2014																													

UNCLASSIFIED

R-1 Line Item #70

Page 12 of 18

UNCLASSIFIED

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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
3228: <i>JPALS 1B</i>	0.000	10.954	37.986	0.000	37.986	49.246	34.423	21.999	0.000	0.000	154.608
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		
A. Mission Description and Budget Item Justification The JPALS Acquisition Strategy separates JPALS into two Increments sharing the same PE. JPALS Increment 1A provides for development , integration, installation, and test of Sea-Based JPALS to meet IOC of CVN. JPALS Increment 1B, beginning in FY-10, provides for integration and testing into the avionics of F/A -18E/F, EA-18G, and MH-60R. This is the first phase of the carrier air wing (CVW) integration to JPALS.											
B. Accomplishments/Planned Program (\$ in Millions)											
						FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	
Fixed Wing Integration This effort includes development, integration, installation, and testing of the F/A-18E/F and EA-18G. This provides the Navy with fixed wing aircraft which are JPALS capable in FY 2015 and out. This is the first phase of the carrier air wing (CVW) integration to JPALS. <i>FY 2010 Plans:</i> Complete Trade studies and begin design activities for F/A-18E/F, E/A-18G. <i>FY 2011 Base Plans:</i> Complete MS B, continue design activities for F/A-18E/F, E/A-18G.						0.000	10.954	28.137	0.000	28.137	
Rotary Wing Integration This effort includes development, integration, installation, and testing of the MH-60 R/S. This provides the Navy with rotary wing aircraft which are JPALS capable in FY 2015 and out. This is the first phase of the CVW and DDG integration to JPALS.						0.000	0.000	9.849	0.000	9.849	

UNCLASSIFIED

R-1 Line Item #70

Page 13 of 18

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy									DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 4: Advanced Component Development & Prototypes (ACD&P)			R-1 ITEM NOMENCLATURE PE 0603860N: JT Precision Approach & Ldg Sys			PROJECT 3228: JPALS 1B					
B. Accomplishments/Planned Program (\$ in Millions)											
						FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	
FY 2011 Base Plans: Begin integration and design activities for MH60R.											
Accomplishments/Planned Programs Subtotals						0.000	10.954	37.986	0.000	37.986	
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• APN/0573: JPALS	0.000	0.000	0.000	0.000	0.000	0.000	0.000	14.500	51.598	526.000	592.098
D. Acquisition Strategy											
Technology Development (TD) phase was conducted jointly by NAVAIRSYSCOM (PMA213), USAF Electronic Systems Command (Global Air) and multiple industry partners. This effort provided the concept of operations, performance specifications and technology readiness levels necessary to provide the foundation from which to launch the Increment 1 SDD phase development. In March 2007, overall joint program leadership transferred from the USAF to the USN. The JPALS 1A phase reached MSB on 27 June 2008 and the SDD phase development contract was awarded on 17 July 2008 and tasking consists of seabased JPALS, related ship and airborne reference systems, end-to-end software algorithms, necessary ship installation hardware, test equipment, system simulation software, and other RDT&E deliverable products to the joint team. The SDD contact was decided after full and open competition. Future procurement of airborne systems will consist of modifications to Original Equipment Manufacture (OEM) aircraft integration and to existing avionics. Seabased JPALS will be developed by the Navy with government owned or non-proprietary algorithms to an open system architecture in order to facilitate the compatible integration of many different aircraft and avionics architectures. As Lead Service, the Navy will manage the Joint Program to develop all JPALS increments. An updated JPALS Acquisition Strategy separates Increment 1 into two Increments (Inc 1A & Inc 1B). JPALS Increment 1A provides for development, integration, installation, and test of Sea-Based JPALS to meet IOC of CVN. Additionally, this requirement supports the JPALS Integration on Amphibious ships and DDG class ships and provides critical enabling technology for Joint Strike Fighter and Navy UCAS. JPALS Increment 1B provides for integration and testing into the avionics of F/A -18E/F, EA-18G, and MH-60R. This is the first phase of the carrier airwing (CVW) integration to JPALS. This second phase of aircraft integration provides JPALS capable aircraft for CVN-79 work-ups and deployment.											
E. Performance Metrics											
MS B scheduled for 1st quarter 2011.											

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R-1 Line Item #70

Page 14 of 18

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy											DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>				R-1 ITEM NOMENCLATURE PE 0603860N: <i>JT Precision Approach & Ldg Sys</i>				PROJECT 3228: <i>JPALS 1B</i>					
Product Development (\$ in Millions)													
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Aircraft Integration-Non Specific	Various/ Various	Var Var	0.000	3.843	Dec 2009	9.031	Dec 2010	0.000		9.031	5.330	18.204	Continuing
Aircraft Integration-F/ A-18 E/F/G	SS/CPAF	Boeing Herndon VA	0.000	5.745	Dec 2009	18.203	Dec 2010	0.000		18.203	35.170	59.118	59.236
Aircraft Integration-MH60 R/S	SS/CPAF	Lockheed Martin VA	0.000	0.000		5.799	Dec 2010	0.000		5.799	13.010	18.809	18.809
Subtotal			0.000	9.588		33.033		0.000		33.033	53.510	96.131	78.045
Remarks													
Support (\$ in Millions)													
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Integrated Logistics Support	WR	NAWCAD Pax River, MD	0.000	0.357	Dec 2009	0.364	Dec 2010	0.000		0.364	8.573	9.294	Continuing
Subtotal			0.000	0.357		0.364		0.000		0.364	8.573	9.294	
Remarks													

UNCLASSIFIED

R-1 Line Item #70

Page 15 of 18

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy											DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>				R-1 ITEM NOMENCLATURE PE 0603860N: <i>JT Precision Approach & Ldg Sys</i>				PROJECT 3228: <i>JPALS 1B</i>						
Test and Evaluation (\$ in Millions)														
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total				
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract	
Developmental Test & Evaluation	WR	NAWCAD Pax River, MD	0.000	0.652	Dec 2009	3.748	Dec 2010	0.000		3.748	33.815	38.215	Continuing	
Subtotal			0.000	0.652		3.748		0.000		3.748	33.815	38.215		
Remarks														
Management Services (\$ in Millions)														
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total				
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract	
Government Engineering Support	WR	NAWCAD Pax River, MD	0.000	0.357	Dec 2009	0.841	Dec 2010	0.000		0.841	10.057	11.255	Continuing	
Subtotal			0.000	0.357		0.841		0.000		0.841	10.057	11.255		
Remarks														
			Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract	
Project Cost Totals			0.000	10.954		37.986		0.000		37.986	105.955	154.895	78.045	
Remarks														

UNCLASSIFIED

R-1 Line Item #70

Page 16 of 18

UNCLASSIFIED

Exhibit R-4, RDT&E Schedule Profile: PB 2011 Navy

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY

1319: *Research, Development, Test & Evaluation, Navy*

BA 4: Advanced Component Development & Prototypes (ACD&P)

R-1 ITEM NOMENCLATURE

PE 0603860N: *JT Precision Approach & Ldg Sys*

PROJECT

3228: JPALS 1B

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UNCLASSIFIED

R-1 Line Item #70

Page 17 of 18

UNCLASSIFIED

Exhibit R-4A, RDT&E Schedule Details: PB 2011 Navy			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603860N: <i>JT Precision Approach & Ldg Sys</i>	PROJECT 3228: <i>JPALS 1B</i>	

Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
Trade Studies F/A-18, F/A-18G	1	2009	3	2010
Trade Studies MH-60 R	1	2009	1	2011
Milestone B	1	2011	1	2011
F/A-18 E/F, EA-18 Design, build, test	3	2010	4	2014
MH-60S Design, build, test	1	2012	4	2014
MH-60R Design, build, test	1	2011	4	2014
Start Production Installation F/A-18, F/A-18G,MH-60 R/S	1	2015	4	2015

UNCLASSIFIED

R-1 Line Item #70

Page 18 of 18